

**TITANIUM CATALYST COMPONENT FOR POLYMERIZING ETHYLENE, ETHYLENE  
POLYMERIZATION CATALYST CONTAINING THE COMPONENT, AND  
POLYMERIZATION OF ETHYLENE USING THE CATALYST**

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**Inventor:** YASHIKI TSUNEO; others: 01  
**Applicant:** MITSUI PETROCHEM IND LTD  
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**Abstract of JP7242706**

**PURPOSE:** To obtain a polymerization catalyst for producing ethylene polymers with a narrow particle size distribution by incorporating a Ti catalyst component prepared by reacting a Ti complex made from a specific alcoholic Mg-Al complex and a tetravalent Ti compound, an organic Al compound and an organic Si compound.

**CONSTITUTION:** A solution comprising a halogenated magnesium compound (preferably  $\text{MgCl}_2$ ), a 6C or higher alcohol (preferably 2-ethylhexanol) and a hydrocarbon solvent is brought into contact with an organoaluminum compound (particularly preferably triethylaluminum) to prepare a solid Mg-Al complex containing Mg, Al, a halogen and a 6C or higher alkoxy group and alcohol. Then a Ti complex comprising a tetravalent Ti compound in which the molar ratio of alkoxy and alcohol to Ti is 0.26-6 is prepared from the Mg-Al complex and a tetravalent titanium compound (preferably  $\text{TiCl}_4$ ). The Ti complex and an organosilicon compound (alkoxysilane, aryloxysilane) are reacted in an inert solvent in the presence of an organoaluminum compound to produce a titanium catalyst component. Ethylenic polymers are produced by using a polymerization catalyst comprising the titanium catalyst component.

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